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Q. Now, you had missing data for BMS, correct?
A. There were as I recall, missing data from all Defendants, and we had to deal with that in -- in the ways that we felt were most reflective of the patterns we were seeing, and let's see where I discuss that. (Witness reviews document.) Okay. Yeah, okay. I have that now. It's at -- the discussion of the treatment of missing data that appears on Page 3 of Appendix A-6, so.
Q. So, let's take Vepesid, for example, how did you account for the missing data for Vepesid?
A. Well, what we -- the general practices were as follows: We often had data missing at the -- the front part, the early part of the period or for 2003/2004 or just for 2004. And for those -- for those early or later periods, we could observe some trend line that either seemed to be a trend or was -- was a random set of -- it was -- the damages were going up, going down, reflected the summation of all the measures year by year, and via inspection, we didn't do any formal econometric

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modeling, if -- if it appeared that there were trends over a period of time, we estimated a trend line, because it seemed to fit better -- fit the data. And if they were bouncing around or flat, we just took a simple average over a period of time.
Q. So, what did you do for Vepesid?
A. For Vepesid, '91, '92 were set equal to the damages for '93. So -- so for Vepesid -- Vepesid (Witness reviews document.) So, what we saw -- well, what it says there is we took '91 and '92, we looked at '93, the -- Medicare damages are set equal -- oh, this is 2003. (Witness reviews document.)
So, looking at Vepesid, I looked there and I see that in '93 we have damages of 722,000. I see in '94 they drop down to 380 -- 382. I see them going up to about -- to 495, 496, 500,000. Then I see them going up to 600,000. So, I'm seeing a -- a bit of a nonlinearity here. This could have -- I couldn't tell from this whether the damages were coming down from an earlier period and then they were going back up, where it was on a trend line

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that was a decline through 1993. We had 1993 data that reflected the information we had, and we said, look, rather than putting above it, we could have maybe taken an average over five years, as a sensitivity analysis. I thought that there was a trend downward, and so, I wasn't going to make it higher than that.
If it had gone down and essentially stayed at 300,000, I may have come to a different decision, but I saw it bouncing back up.
Q. Do you know when Vepesid lost its exclusivity?
A. I have that listed somewhere, but I don't -- but I'm sure you're going to tell me right now. When was it?
Q. 1993. Assuming Vepesid was a sole-source drug in '91 and '92, and it did not face therapeutic competition, don't you think your method of allocating damages from 1993 to 1991 and '92 is inappropriate?
A. Let me help understand that a little bit further. When in 1993 did it lose its exclusivity?

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Q. I can't tell you the precise date.
A. Okay. Well, that would matter in the decision. Secondly, if the loss of exclusivity -- what we've -- what we've found is that -- that spreads usually increase with the loss of exclusivity. And so, that's when there's going to be -- when there's other competition that there's going to be -- when you see the spreads going up. If you look at Zofran and Kytril, those examples, Taxol, so there's --
Q. I'm telling you there wasn't competition in '91 and '92.
A. I know, and what I'm saying is when there's not competition, that's when there's no need to have very large spreads. So what I'm saying is that if you're telling me the competition disappeared, that it came on -- there was no competition in '91 and '92, then -- then you're right. Those are -- those are high.
The -- but the -- but let me step back for a second here, because if there was competition in '94, '95 I would -- you'd need to do more analysis,

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because I'm seeing with the spreads going up, then I'm seeing them going down again. The -- if -- if BMS -- we -- we did the best we could with the analyses that we could apply here with the data we received. If BMS would give us that data, we could estimate this precisely. And we can do -- we could do sensitivity analysis of whether an average might be a better number, but given that there's competition in '94, as you say, and it's only 382,000, and then it's going up to 500,000 and 600,000, there are other things going on here, and we had to do things arbitrary when we weren't given the data by Defendants. I'd be glad to correct that if you could provide the data to us.

Q. At your last deposition we talked about the financial arrangements between you and Plaintiffs' counsel for this case. Have those arrangements changed in any way?

A. No.

Q. How much have you been paid by Plaintiffs to date?

A. I'd -- I'd have to look to the invoices. I

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just -- I don't keep track of that, and I probably should have brought the -- the invoices.

Q. How much have you billed Plaintiffs to date?

A. Well, the same answer.

Q. Have all of your bills been paid?

A. I think most --

MR. NOTARGIACOMO: Think very carefully when you answer that one. I'm sorry.

A. I think we're close. I mean, as far as clients go.

MR. EDWARDS: Okay. I'm going to yield the chair at this time to one of my co-counsel.

MR. NOTARGIACOMO: We've been going about a little over an hour and a half. I think it makes sense to take a five-minute break while we switch off.

MR. EDWARDS: I'm sorry. I'm frankly a little deaf. I didn't hear you.

MR. NOTARGIACOMO: I think we've been going about an hour and a half. I think it makes sense to take a short break before we switch off.

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MR. EDWARDS: Okay. Sure.

VIDEO OPERATOR: The time is 3:35. This is the end of Cassette 3. We are off the record.

(Short recess taken.)

VIDEO OPERATOR: The time is 3:50. This is the beginning of Cassette 4 in the deposition of Raymond Hartman. We are on the record.

FURTHER EXAMINATION BY MR. FLYNN:

Q. Afternoon, Doctor Hartman. New face. Michael Flynn --

A. Good afternoon, Mr. Flynn.

Q. -- from Davis Polk representing Astra Zeneca in this matter. Could you pull out the attachments to your supplemental declaration, which is Exhibit Hartman 024, and Attachment A, the Astra Zeneca-related attachments. Do you have Page 1-A in front of you?

A. I do have Page A-1. I have Attachment A-1.

Q. Right. The first page of that attachment?

A. Right, I have it.

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Q. Can you confirm for the court, Doctor, that with respect to Class 3 you assign no liability and no damages for Pulmicort respules?

A. For Subclass 3, there are -- there is -- there are no damages and so that my -- that would indicate to me, absent a calculation error, that there was -- yeah, there were no damages or liability under -- for those drugs in that context.

Q. With respect to Classes 1 and 2, the first page of Attachment 1 shows that you assign damages for Pulmicort respules beginning in the year 2000, do you see that?

A. I do.

Q. Can you tell me why you started with the year 2000?

A. Well, I would have to -- I think the best bet for me to -- these are summaries that I had my staff do, and I would have to go and look at the specific calculations underlying those -- those results, and I am seeing in -- in so -- all of Attachment A-1, sub little A through whatever the ultimate letter is deals with AZ drugs, and these

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are showing that -- these are actually damages. Let me actually -- just to make sure. What I'm interested in is the spreads and whether the drug had actually -- when it had launched, and I'm turning to my -- this December 15th report to be able to ascertain that.

Q. If you can just identify for the record what you're referring to when you get there, that will be helpful.

A. I most certainly will do so. (Witness reviews document.) Okay. I am looking in my December 15th, 2005 declaration, Attachment G and G-1 is Astra Zeneca, and so, what I'm seeing here is essentially that Pulmicort respules appear in our data, and I have to assume that they launched in 2000, because I have annual average sale prices at that point. I'm assuming we weren't missing any data, because I haven't seen it mentioned or any kind of approximation thereof. The AWPs associated with those drugs are found in G-1-B for the Pulmicort respules, and then the spreads are found in G-1-C of that report.

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Q. And so in G -- in G-1-C, which you are looking at now, you show spreads for Pulmicort respules beginning in 2000 of 21.61 percent; 2001, 20.92 percent; 2002, 26.98 percent; 2003, 25.31 percent; and 2004, 24.71 percent for the first NDC mentioned for Pulmicort respules, right?

A. That's correct.

Q. And then right below that, I won't have to repeat them, are the spreads you have calculated for the next NDC for Pulmicort respules, is that right?

A. That's correct.

Q. Okay. If you -- if you turn, Doctor, a couple of pages in in your -- in your December 15th report in the attachments, just to clarify for the record, if you go to Attachment -- I guess it's I.1 where you have Xs in the boxes where the drug is subject to liability or not.

A. Right. I have done so.

Q. And in your first report on liability and damages, the December 15th report, Exhibit Hartman 023, I take it that this attachment reflects the fact that you found no liability with respect to

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either NDC of Pulmicort respules, is that correct?

A. Given the threshold of liability and that yardstick in that December report, that's correct.

Q. And if you turn to Attachment J-1 in that same report --

A. Right.

Q. -- if you look for each Subclass, Class 1, Class 2, and Class 3, I'm correct, am I not, Doctor, that you find no damages for Pulmicort respules at all in your analysis?

A. Relative to that -- that yardstick for liability, that's correct.

Q. Now, let's return, Doctor, to the attachments to your supplemental report, Exhibit Hartman 024, if we could. And having -- having looked at the materials you wanted to reference, I'll reiterate my question. Why is it that you started assigning damages to Pulmicort respules in your supplemental report beginning in the year 2000?

A. As I discuss in the -- the first paragraph or two of the supplemental declaration, I was asked by counsel that I was not -- I was going to

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calculate these damages subject to an interpretation of Medicare that didn't take account of that -- the yardstick spread of the -- the drug inflation and just look at the -- the wording of the statute.

So, these do not take account of -- they do not net out the -- well, they don't take account of the fact that the spreads were below the 30 percent. These are the damages implied by the fact that the spreads were not -- that the AWP was in excess of the ASP.

Q. Other than your minimal threshold of liability, the 30 percent yardstick, is there any other assumption in forming your decision to start assigning damages to Pulmicort respules in the year 2000?

A. Conditional on the assumption that we received a lot of this data and we processed it quickly, and that this is the -- the summary of the correct data, that I would say that that's right.

Q. So, no other assumptions.

A. No other assumptions.

Q. Do you assume for damages for Class 1 and

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Class 2 in your supplemental report for Pulmicort respules that Pulmicort was being reimbursed through Medicare Part B?
A. These are the sales -- the unit sales that were attributable to -- to Medicare, as calculated in the same methods -- using the same methods as discussed in the December 15th declaration. So, the units -- it's assuming the same units would have been prescribed and reimbursed.
Q. So, so I'm clear, the answer to the question is that you're assuming in calculating damages for Pulmicort in your supplemental report in the years 2000 and 2001 that Pulmicort was reimbursed through Medicare Part B, correct?
A. Well, I -- I assume that -- it was reimbursed through Medicare Part B in both -- in both reports under -- for the Medicare beneficiary, Subclass 1 and 2.
Q. And you assume that there was Medicare Part B reimbursement for Pulmicort respules in the year 2000 and 2001 under Medicare Part B, correct?
A. Yes.

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Q. What's -- what's the basis for that assumption?
A. The basis for that assumption is how I determined whether a drug was reimbursed under Medicare, that it had issued J-codes, that I saw in -- in the NAMCS data wherever I looked for data when I pulled up the -- a doctor's visit for a certain drug that -- that it appeared there, and it -- so it's the same criteria that I've used for all of the drugs that are put forward in the December declaration.
Q. So I understand, the basis for your assumption is that there's a J-Code corresponding to Pulmicort respules and that the NAMCS data shows you what percentage was reimbursed under Medicare Part B for Pulmicort respules, correct?
A. The basic -- as I looked at various NDCs, I looked whether there was a J-Code to determine whether they were essentially subject to Medicare HCPCS codes so that they would fall under the purview of Medicare when that was the case, and I looked at when they were -- when they were sold in

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the market, and then I -- so that that tells me they launched in 2000 based on the data I received, and I looked at the NAMCS data, if it existed for Pulmicort. That tells me that when a patient visits -- that all the patient visits to doctors' offices in which Pulmicort was administered, that Medicare was the primary reimburser. And that's the same practice I've used for every drug --
Q. What --
A. -- assuming that data was there for those.
Q. Can you tell me what your citation or support is for your assumption that Pulmicort respules had a J-Code starting in 2000?
A. I would have to -- I'd have to provide that for you. I had my staff -- I set a set of criteria and that was one of them, and so they'd have to provide that to me.
Q. Sitting here today you can't provide me?
A. Not --
Q. If -- if you were to learn, Doctor, that Pulmicort did not have a J-Code corresponding to it in the years 2000 and 2001, this analysis of damages

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for 2000 and 2001 would be incorrect, is that right?
A. Well, I'd want to -- I would certainly want to look more closely at -- I mean, there's J-codes. There's Q-Codes. There's a variety of codes that are interim codes and -- for inhalants and for various types of different durable medical equipment codes. So I'd have to look more closely and say -- but if you're telling me that the criteria which I used to identify what were physician-administered drugs or reimbursed under Medicare Part B, if the claim is that in 2000/2001 they weren't, I would have to have my team go back and -- and revisit those -- the factual evidence and clarify whether there was something that wasn't interpreted correctly or there were some missing information.
Q. And that's because you would go and correct your report because the assumption on which damages for Pulmicort in 2000 and 2001 are based is that it was reimbursed through Medicare Part B, correct?
A. Yes.
Q. Now, Doctor, with respect to Pulmicort

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respules, putting aside the issue that we've just been talking about -- about when it became eligible for Medicare Part B reimbursement, you're assuming in your damage calculations in your supplemental report a certain percentage of Pulmicort sales being reimbursed through Medicare Part B, correct?
A. I -- I'm sorry. Maybe it's getting late. It sounded like you were asking me the same question. I mean, I'm -- my -- the assumptions -- I've made no assumptions about any of these drugs before going to the data to confirm am I seeing J-codes? Is it something that would be classified as a Part B or a physician-administered drug? Is it related to a DMERC? Do I find in NAMCS that there are reimbursements that are paid under those -- under those categories of reimburser. So --
Q. You use NAMCS to extrapolate a percentage of sales that would fall into the Medicare Part B bucket as opposed to the private payer bucket, correct?
A. Correct.
Q. And you did -- you have an assumption,

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whether based on NAMCS or something else, with respect to the sales of Pulmicort respules, correct?
A. That's correct.
Q. And what is that assumption as to the division of sales that fall into the Medicare bucket, as opposed to the nonMedicare bucket --
A. Well --
Q. -- for Pulmicort respules?
A. If -- what the NAMCS data does -- do, what the NAMCS data do is it's a -- it's a survey of doctors' visits, physician office visits, and it says, look, you've had someone visit, and as part of the diagnosis and for a particular problem, you've prescribed Pulmicort, Pulmicort respules, and you've submitted reimbursement thereto. And the NAMCS data says, okay, what was the primary insurance coverage -- primary payer in this matter? Was it a private insurer? Was it Medicaid? Was it other? Was it self pay? And was it Medicare? And that's -- in all cases, the NAMCS data, which are discussed in -- in greater detail in Attachment J-7 of my December declaration describes those data. So, I would look

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to NAMCS. And we had NAMCS data on a year-to-year basis if it were available where I could draw those percentages.
Q. Do you have any recollection of whether or not there was NAMCS data for Pulmicort respules?
A. Let me see if -- let me check.
MR. FLYNN: Maybe I can help just to cut through it. Let me mark this I don't know what exhibit number we're up to but whatever the next one is.
(Letter, 2/6/06 marked Exhibit Hartman 054.)
MR. FLYNN: I don't have 20 copies.
Q. I'm going to direct your attention, Doctor, to Page 7 of this letter. Let me just identify for the record what this is. This is a February 6, 2006 letter from Plaintiffs' counsel, Mr. Berman to Mr. James Zucker of Hogan & Hartson.
A. Uh-huh.
Q. Is that correct?
A. It seems to be.
Q. Would you turn to Page 7, Paragraph 21 of

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this letter. Do you see Paragraph 21 says, "As stated in the notes, where NAMCS data were not available approximations were used based on anecdotal information if available. If no anecdotal information was available, an arbitrary 50/50 share between Medicare and nonMedicare is used. In the case of Pulmicort, based on industry experience, it is understood that these NDCs are indicated primarily for nonMedicare patients, therefore, a 10 percent/90 percent share between Medicare and nonMedicare was used."
A. I do see that.
Q. Okay. Does that refresh your recollection as to how you came up with the percentage for Pulmicort respules of -- as between Medicare and nonMedicare?
A. It does.
Q. Now if you look at that letter that I just read from, it says, "In the case of Pulmicort, based on industry experience, it is understood that these NDCs are indicated primarily for nonMedicare patients." Then it goes on to say, "Therefore, a 10

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percent/90 percent share between Medicare and nonMedicare was used."

Can you explain to me, Doctor, the basis for the 10 percent/90 percent share.

A. That was a -- a best approximation, pooling, thinking among -- among the staff and among some of the affiliates at Harvard of what that share might be.

Q. Do you --

A. So it was -- this was not -- we couldn't get hard data, so it was our, you know, best -- best guess.

Q. Did you look at any deposition testimony of any Astra Zeneca witnesses to try to help determine what percentage of Pulmicort respules were subject to Medicare reimbursement?

A. We did not have a chance to do that, no.

Q. Okay. And is there anything you can cite to me to support your 10 percent, other than what you've testified to?

A. No.

Q. And in your mind, it could have just as

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easily been 5 percent, correct?

A. If it had been 5 percent/95 percent, the -- my reliance here came more from my colleagues at Harvard that are familiar with these types of drugs, familiar with this type of reimbursement that do Medicare, that do nonMedicare payer analyses. And so, this was something that was discussed, and the shared experience of however many years of research were reflected in this. But it was -- it was a number that I essentially said, can you guys give me a better number that 50/50.

So I think it was -- I think it's better than 5 and 95, because if it was 5 and 95, they would have told me that. But it's based on their -- the oral tradition and the experience that they've -- they've had.

Q. And who are these people we're talking about?

A. We're talking about Professor Rosenthal, Professor Joe Newhouse, Professor Tom Maguire, Professor Richard Frank. These are various people that are affiliates of my firm and that I talk to.

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Q. And is it your testimony that -- that these people all gave you an opinion as to the percentage breakout?

A. It's my testimony that -- that these issues were talked about with them, and I -- with different -- with them at different times, and this was the best numbers that -- that we could come to, based on that -- that peer -- that informal peer review. And to the extent we can refine this through a review of deposition testimony, that would be a desirable thing.

Q. Is it significant to you at all, Doctor, that Pulmicort respules are not tracked in NAMCS?

A. It's -- I don't know what to draw from that. I'd need to -- to know more.

Q. And you didn't do any independent work other than the conversations -- the general conversations you've testified to with members of your staff to try to figure out the breakout for Pulmicort, correct?

A. Well, I did for all of the -- all of the drugs in the -- in the -- subject to the complaint,

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I did ask Defendants for the IMS NDTI data, which, as I understand it, is a much more comprehensive sample of office visits that I thought could help inform further what the percentages were for those drugs where I either had NAMCS data or where I didn't. So, I would still -- before I read anybody's deposition, I'd like to get that IMS data from Defendants, and I think that would help refine these numbers considerably.

Q. But this is just a number picked out of thin air by people on your staff as far as you know, right?

MR. NOTARGIACOMO: Objection.

A. No, it's not picked out of thin air.

Q. Did they show you any documentation to support it?

A. They don't. They don't need to show me documentation in the sense that they deal with dispensing patterns; they deal with reimbursement patterns; they deal with issues of where inhalants are -- NDCs that can either be a nebulizer, something that's used in a doctor's office or an

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inhalant. What would be subject to Medicare, what wouldn't be subject to Medicare. They have decades of experience among them. So, this is not like asking four people on the subway. They know something. Now, it would be much more preferable for me -- for you to give me the IMS data from -- from your firm to let me check with -- what those numbers are for Pulmicort, and I could refine these numbers very easily.

Q. Do you know if those numbers are tracked in the IMS data?

A. I understand that the IMS tracks -- that they survey doctors' visits for a broad cross-section of drugs. I haven't been able to see whether those appear there because I haven't gotten the data.

Q. Do you know whether or not Pulmicort is administered by doctors in their offices?

A. It's my understanding that it can be administered via nebulizer or as an inhalant, so I'm not sure.

Q. You don't know whether or not it's

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administered by doctors as opposed to being administered by patients at home, do you?

A. It's my understanding it can be both.

Q. Do you have any data to suggest the prevalence of -- of how it happens?

A. Well, the data is -- somewhat has to do with whether it's a Medicare Part B or the -- or a nonMedicare drug.

Q. Why is that?

A. Well, if it's -- if it's Part B, it's -- then it's -- this is clearly not something that's injected by a doctor. It's a nebulizer that would be done in a doctor's office. And the -- the percentage of that -- if it's prescribed by doctors in a nonMedicare context, that would mean that it's more of an inhalant and it's not done in a doctor's office. They might get the prescription at the pharmacy.

Q. You just said in your answer that it's a nebulizer done in a doctor's office. What's the basis for your statement that it's done in a doctor's office, as opposed to being done outside of

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a doctor's office through the use of durable medical equipment?

A. It's -- it's my understanding that it can be either, but that it is -- under Medicare it's billed as if it were the former.

Q. Why is it billed as if it were the former?

A. Because the -- it's my understanding that drugs of that -- of that sort are treated as Part B drugs and they've been grandfathered under Medicare reimbursement.

Q. Whether they're part -- whether they're treated as Part B drugs or not does not tell you anything about whether or not they were administered in a doctor's office, is that right?

A. The -- certainly the -- the part -- the physician-administered drugs has come to be thought of and designated as a Part B drug. So, the drugs that are Part B drugs have that association, but you're right, it doesn't have to be in a -- in a doctor's office.

Q. And you don't know and can't cite to me any statistics as to the percentage of Pulmicort

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respules that are actually administered by a doctor as opposed to being administered by a patient through durable medical equipment outside of a doctor's care.

MR. NOTARGIACOMO: Objection. Asked and answered.

A. We've -- you've got the best estimates I have from the sources upon which I relied.

Q. And I don't -- can you point me to what are you referring to specifically as to the --

A. The 10 percent/90 percent.

Q. But that doesn't tell me, as we just established, anything about whether the physician administered Pulmicort or whether it was administered by the patient using durable medical equipment, is that right?

A. That's right.

Q. Doctor Hartman, are you aware to whom my client, Astra Zeneca, sells Pulmicort respules?

A. Uhm.

Q. I'm looking for -- I'm looking for a category of person in the drug distribution process.

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A. No, I don't.
Q. Do you have any -- any idea of whether or not Astra Zeneca sells Pulmicort respules to doctors?
A. I would be speculating.
Q. So the answer is no?
A. Let me reflect upon this. It -- it would be my assumption that Pulmicort respules, some Pulmicort respules are sold to doctors, more specialty pharmacies.
Q. Can you quantify for me the percentage of sales to doctors of Pulmicort respules?
A. No.
Q. Okay. Did you take into consideration in performing your analysis in this case or in rendering your opinions to whom Astra Zeneca sold Pulmicort respules?
A. Are you talking about did I take into account whether it's a pediatric drug, whether it's a drug for the elderly? Are you taking what --
Q. No. What I'm asking is we've just established you don't know to whom my client sells

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Pulmicort respules, whether it be wholesalers or doctors. You testified that you think some are sold to doctors, but you can't quantify for me how much. I'm asking in your analysis in establishing and assigning liability and damages in your supplemental report for Pulmicort respules, did you consider the audience to whom Astra Zeneca was selling Pulmicort respules and the percentage of sales to those entities?
A. In -- in including Pulmicourt and in treating the units that we did treat, Pulmicort, as all of the drugs that appear in the report were reviewed by this group of -- at the Harvard School of Public Health and my staff, and whatever documents they saw, such that whatever units were sold were -- and to whatever -- to whomever they were sold ended up being reflected in the types of reimbursement patterns that are reflected by that 10 percent/90 percent. So I have to assume that that has been looked at by the team that was going drug by drug in doing this assessment, but they -- I -- I relied on their -- their insights and their

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decisions in that regard.
Q. I'm talking as a conceptual matter did you consider whether or not your methodology was applicable to Pulmicort respules on a conceptual basis. I know that you took into account the 10 percent figure you assumed.
A. The -- I -- the methodology that I have taken in -- that I have developed here is applicable to physician-administered drugs or Part B drugs, and if this is not a physician-administered drug or a Part B drug, then it would not -- if that -- if this does not appear in that context, then my -- then my -- my staff that did the evaluations and identified what percentage of sales were subject to this effort have -- haven't used all the information that would be available, and if you could -- if that could be put forward by Astra Zeneca, we would be glad to refine these calculations.
Q. Put aside the calculations and the 10 percent. I'm asking you as a conceptual matter did you take into account the fact that Pulmicort respules were sold to wholesalers and not doctors in

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deciding whether or not this yardstick approach that you've developed is applicable to Pulmicort respules?
A. If the -- if the ultimate purchaser who determines the reimbursement and who -- who determines what drug is used -- what drug is dispensed, and there's an average sale price, whether it's sold through wholesalers or whatever means, if it's subject to the same types of -- of incentives that we're talking about with physician-administered drugs, and a number of the physician-administered drugs are sold through specialty pharmacies, that -- then it belongs in -- in this group. And that was a question I asked of the staff vetting each of these drugs and the NDCs of each of these drugs, and the ones that are -- are left met that criteria as they implemented it.
Q. You don't have any independent basis for that other than what your staff may have told you?
A. Well, I'm not an expert in -- in Pulmicort respules or the diseases for which it's treated. There are people that know more about that at

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Harvard School of Public Health that helped -- helped me in developing these -- these variables.
Q. Assume for a second, Doctor, that there was no J-Code for Pulmicort respules prior to 2002, do you think it would have been a valuable analysis to do to compare the pricing decisions with respect to Pulmicort respules before and after Pulmicort received J-Code status?
A. I would -- the -- since the J-codes -- well, if indeed there were no J-Code in 2000 and 2001, and if there were no Q-Code or if there was no intermediary code that was recognized by Medicare, and you're just telling me that the only things that were available were NDCs, one, I'd want to see whether billings under -- on Medicare claims were based on an NDC basis in that situation, and if they were, then there would be no information to be gained between looking prior to 2002 or after 2002, because once they go to a J-Code, it's going to be dosage specific, and there will be an NDC -- an AWP related to an NDC or a fundamental billing unit that's related to an NDC. So I'd have to see more

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closely how Medicare dealt with that and to -- to do that assessment.
Q. Do you know which party in the drug distribution process is responsible for negotiating reimbursements for Pulmicort respules under Medicare Part B or otherwise?
A. The -- negotiating the reimbursements paid to -- to the providers or paid -- paid to whom? What reimbursement rates are we talking about?
Q. Well, some -- somebody provides Pulmicort respules to an end user --
A. Right.
Q. -- correct? And the person who provides those Pulmicort respules to an end user get -- gets reimbursed, correct?
A. Uh-huh.
Q. Did you -- do you know who it is who negotiates for the reimbursement of Pulmicort respules? Somebody negotiates with payers for that reimbursement. Do you know which -- which entities in the drug distribution chain that is with respect to Pulmicort respules?

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A. I would assume that physicians are one of the entities, and the other entities I haven't examined in -- in detail.
Q. What's your basis for the assumption that physicians are involved in negotiating with payers for the reimbursement of Pulmicort respules?
A. Well, it's my -- my assumption that this drug appears as a Part B drug that is -- that is subject to physician-administration under some -- either in the office or as a part -- as a Part B drug outside of the office.
Q. And if it's a Part B drug outside of the office, would a physician be involved in negotiating for the reimbursement for that drug?
A. I'm not -- I'm not sure.
Q. So you don't -- your testimony is you really don't know who negotiates for reimbursement with respect to Pulmicort respules. You don't know if it's doctors. You don't know if it's pharmacists. You don't know if it's wholesalers, is that right?
A. Well I'm -- my guess is it's a mix of the

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three.
Q. But it's just a guess.
A. It's -- it's in -- I would say an informed guess.
Q. Okay. It's informed by, again, your staff?
A. Informed by my staff, informed by the -- the value added in the thinking that they have brought to bear on the issue.
Q. And I assume you would agree with me, Doctor, that it is doctors who control the prescription decisions as to whether or not Pulmicort respules are prescribed as opposed to a competitor drug.
A. That is my understanding.
Q. Okay. And to the extent that doctors are not involved in the negotiation over reimbursement rates because they don't administer Pulmicort respules, there's a division between the entity that is responsible for the prescription decision and the entity that negotiates the reimbursement with payers as to Pulmicort respules, is that right?

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A. That would be correct to the extent that's true.
Q. Did you take that into account at all in rendering opinions with respect to Pulmicort respules in this case?
A. The assumption in -- built into this -- into the modeling has been that the physician is the -- is the entity, the provider that is primarily responsible for that negotiation.
Q. And to the extent that assumption is incorrect, you would want to revisit your analysis with respect to Pulmicort, is that right?
A. That's correct.
Q. Okay. Doctor, did you do any analysis of the extent to which over the years Astra Zeneca sold Zoladex to physicians at the WAC price?
A. I've certainly looked at patterns of sales of Zoladex. I can't say that I focused on those sales at WAC.
Q. And you can't tell me and you didn't analyze what percentage of sales of Zoladex occurred at WAC in 1991, '92, '93, or any of the years of the

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class period, is that right?
A. Now, you're saying sold to the providers at WAC?
Q. Correct.
A. I would assume the data would be able to tell me that.
Q. But you haven't studied that?
A. Well, I mean, if we want to look at the -- what the spreads were, we would know what the spread from WAC AWP would be, and I would look at the spread to see whether the ASP was reflecting -- to the extent that it was sold at WAC, that's one of the -- the ASP would be WAC in that case for that -- for that set of sales. So it would figure into the average ASP year by year. So, it's -- if you're telling me in any given year that 20 percent, 50 percent was sold at WAC, that appears in my numbers.
Q. But that doesn't affect your conceptual framework for assigning liability and damages in this case, correct?
A. Of course it does. It affects the overall spread on all the units sold.

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Q. Again I asked you conceptually, Doctor. If -- if it turns out that Astra Zeneca sold zero units of Zoladex to doctors at WAC, that wouldn't make any difference to you conceptually if it's compared to 10 percent or 20 percent of Zoladex sales at WAC. It makes no difference to your conceptual liability and damage model, correct?
A. The spreads that I calculated on an annual basis take account of AWP and an acquisition at an average sale price that -- some of which may be WAC, some of which may be discounts off of WAC or off other types of discounts. So, if zero percent of them were at WAC or 5 percent or 10 percent, I'm looking at the overall summary of the pricing strategy of Astra Zeneca for that year.
Q. Aside from the numerical impact of the calculation of spread as you have calculated it, you haven't taken into consideration the implications on a conceptual level of sales at WAC, correct?
MR. NOTARGIACOMO: Objection. Asked and answered.
A. What I -- what I hear you asking me is

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have I identified unit by unit whether Astra Zeneca's decided to have a spread on a sale that -- that is -- that might be one, based on WAC, and on another unit, based on ASP. And I'm saying that that's -- that's not a meaningful way to think about this as an economist, and you're looking at all of the sales, and I -- it's not a really a relevant question to what we're -- I'm getting at in my declaration.
Q. Well, you have a theory, Doctor, am I correct, that explains the reason for the spreads between ASPs and AWPs, is that right, for the drugs you've studied in this case?
A. I -- that's -- it's -- certainly spreads enter into my formulate methodology.
Q. And you have -- your -- your view, I take it, and what you've been talking to Mr. Edwards about for the last day and a half, is that drug manufacturers in this case inflated their AWPs relative to ASPs in order to try to compete and move market share, right?
A. That's correct.

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Q. Okay. Did you take into account any other possible alternative reasons why manufacturers would want there to be a spread between AWP and ASPs, particularly in situations where there's therapeutic competition?
A. I've -- I've dealt with the reliance on spread and what the meaning is and how it is used as a strategic variable when there is therapeutic competition. I guess I'm not understanding what you mean. Are you saying there's some other reason --
Q. I'm asking --
A. -- besides competing on spread that might be the cause of increasing spread?
Q. I'm asking whether you considered if there were.
A. I didn't -- I didn't -- I didn't -- I didn't see any. I -- I'd -- the -- in terms of -- if you didn't have to compete on spread and in a spread that was not nontransparent, you're going to either uselessly raise your AWP -- I mean if you don't have to compete on -- if you don't have to use spread to compete, there's going to be no reason to

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raise your AWP. And so, I wouldn't see why anybody would just raise their AWP and perhaps invite scrutiny of -- of the Justice Department. And I see no reason to lower what you're making per unit, the ASP, unless you were using it strategically.
So, as a matter of economics, I don't see that there is any other reason. Doing either of those -- of what you do to increase the spread would only get you in trouble, it seems to me.
Q. So, in doing your analysis in this case, you didn't hypothesize alternative explanations for the spreads between AWPs and ASPs and then try to figure out whether or not there were ways to say that those were not valid reasons.
A. Well, I -- I hypothesized them, but I -- but as a matter -- as a matter of economics, I found that they weren't reasonable.
Q. What were the alternative explanations that you hypothesized and ruled out?
A. Well, one could just -- one could lower the -- the ASP, and if that's not going to increase your market share, you're just essentially

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diminishing your total revenue. So, the only reason that you would lower your -- the -- your unit revenue, your average sale price would be to take advantage of being able to move market share. I don't see -- I mean, another reason might be to be charitable. I don't -- I don't believe that business entities are in the business of being charitable and dropping their prices. I -- I didn't see rational economic reasons that would -- or policy reasons, business strategy reasons to just raise the AWP unless it increased the spread so you could -- you could move market share, 'cause that would only get you in trouble.
Q. Do you know, Doctor, that AWP goes up formulaically when a company like Astra Zeneca increases its WAC price?
A. Of course.
Q. Did you consider whether or not there was any economic reason why Astra Zeneca would want to increase its WAC price over time?
A. The WAC and the AWP are essentially the same -- the same benchmark. I mean, they're --

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they're joined at the hip, except for when a price information reporting agency would change a reported spread from 20 to 25 percent, but they're essentially overseen by manufacturers and they're different -- they're different list prices. One's a -- one's a sticker price and one's a catalog price, I think, as Dawn Gencarelli says.
So the notion of saying that there was some real meaning to WAC is -- that doesn't have economic meaning to an economist. It's a list price. It's used as a list price.
Q. So do you --
A. It's used to communicate information.
Q. I take it by your answer you did consider whether or not there was a legitimate economic reason for my client, Astra Zeneca, to raise its WAC price over the class period and you ruled that out.
A. I considered -- my focus was on AWP and whether there were legitimate reasons to increase the deviation between AWP and ASP. Since WAC is tied to AWP, any change in AWP implies a change in -- in WAC. And whether you report WAC or AWP to a

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pricing reporting group, you're reporting the other one. So, changes in either of those were reflecting changes in list prices that were -- that were signals and that were taken as signals to the market, and were inappropriate signals to the extent that they deviated the way they did from ASP.

Q. So let me just -- I just want to make sure I understand what you just said. You did consider whether or not it was legitimately economically rational for Astra Zeneca to increase its WAC price over the class period, and you determined that it did not provide a legitimate alternative basis for the differences between AWPs and ASPs.

MR. NOTARGIACOMO: Objection.

A. I considered -- I have considered AWPs, WACs, changes thereto, how they were related and tied to one another for the preponderance of the drugs in the period and how they were related to ASP and I -- I reflected on different reasons that any manufacturer would want to increase the spread, and I -- I found none that made rational economic sense to me, changing AWP or WAC, that was anywhere as

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important as attempting to move market share.

Q. So --

A. And I could think of none, actually.

Q. So, you can think of no legitimate economic reason why Astra Zeneca would want to increase WAC over the class period, is that what you said?

A. I'm talking about spreads and if I'm looking over a period of 15 years and I'm looking at list prices, then list prices can go up as a reflection of transaction prices going up. So, yes, AWP can go up and -- and as long -- when it's -- when it's a list price it's a reflection of transaction costs and it's something upon which people -- you're using as information. As costs may go up, as factors may change, then there could be legitimate reasons where AWP and WAC would go up reflecting that. I'm talking about how that is changing relative to ASP is the important thing.

Q. So -- so I take it now you have considered whether it would be normal economic behavior for a manufacturer to raise its WAC price because there

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are customers who are willing to pay WAC?

A. No, the -- I'm -- you were talking -- when I was hearing you talk about changing WAC, it was holding everything else constant. I'm saying that in a period where costs are going up, things -- there's changes in demands, there are other kinds of broad economic changes going on. A list price could go up, a list -- a catalog price could go up reflecting changes in demand and costs, and that's also reflected in sales prices.

What I'm getting at is that I can -- there's no economic reason that I see moving those when the sales price -- the average sale price, the actual transactions costs don't go up, except to move market share.

Q. So there is -- there is in your mind a legitimate economic reason to increase your list price, whether you call it WAC or AWP, for reasons of inflation, increased cost, the fact that customers are willing to pay that, is that correct?

A. WAC -- list price can change, reflecting economic conditions, and WAC is a list price, yes.

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Q. And one of -- one of the conditions that would be legitimate for manufacturers to take into account is how many customers are willing to pay an increased WAC price, correct?

A. Well, when we -- when we talk about customers -- WAC price is what is the -- is the price that is the transaction price between wholesalers and manufacturers. I mean, the -- essentially, the prices to the ultimate customers are contract prices that are -- where the wholesalers are made whole with -- with respect to the charge-backs. So, changing the WAC price, yes, that's -- that's raising something that is the -- the internal price between wholesalers and manufacturers, but are you talking about that WAC price is influencing a contract price of a -- of an ultimate consumer?

Q. Your testimony is not, Doctor, that no doctors paid WAC for Zoladex during the class period, is it?

A. That no doctors --

Q. Paid --

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A. -- paid WAC.
Q. -- WAC price for Zoladex during the class period, is that right?
A. No, it's possible that the -- that some doctors did pay -- their ASP was equal to WAC.
Q. And WAC is not a price just reserved for wholesalers with respect to physician-administered drug, is it?
A. WAC is a very -- WAC means wholesale acquisition cost, so it may be the case that a doctor got it at the wholesale acquisition cost and the dollar amount is -- happened to be what is listed as the wholesale acquisition cost, but I don't think that the manufacturers think of WAC as something that is a provider cost. It just so happens they might have sold it to a provider at WAC.
Q. And what's your basis for that?
A. My -- the -- my study of this market since the brand -- prescription brand name drug case.
Q. If a manufacturer were to raise its WAC because a customer, meaning a provider, is willing

1151

to pay that price, that would be normal economic behavior, even if the overall ASPs were going down, isn't that right?
A. Well, if -- I don't -- I don't -- if the ASPs were going down, that would mean the provider could get it if the ASP's going down. Why would he want to pay WAC that's higher than the ASPs? I mean the ASPs are to providers.
Q. Well, what if there were some providers who are willing to pay WAC?
A. Well, there's going to be a -- there's a -- the average sale price is the average sale price. Some providers are going to pay a little bit more, some are going to pay a little bit less. So there's a distribution around the average sale price.
Q. And if you can get some providers to pay WAC price on an increased basis over time, it's in -- it's economically rational and legitimate to raise your WAC price, isn't it?
A. Well, what you're raising is your ASP. Are you telling me that you're -- you're trying to get doctors to pay this price, but you're calling it a

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WAC price that's to wholesalers that you're also raising while you're raising the -- the acquisition cost to providers?
MR. FLYNN: Can you just read back my question.
(Question read back.)
A. So, if you can get some providers to pay the WAC price, it's -- it's in your interest to keep those providers paying the WAC price. If you raise your WAC -- you don't know if -- that's not talking about everybody else who's buying at WAC. If there's a whole bunch of other people buying at WAC and you raise it, they might not buy at WAC. Your hypothetical is looking at a subset of customers, and you say you can raise the price to them but then you're raising a list price that's WAC to everybody. Well, that's going to have effects on other people that might be price sensitive in the other direction. I don't -- I don't hear you taking that into account. The average sale price is what summarizes the distribution of all these customers, some that are willing to pay at WAC, some that will

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say I'm only going to pay at WAC less 15, and that's what the average sale price is.
Q. But you would agree with me that if you can get some providers to pay WAC, it's in your interest to charge them WAC, right?
A. If you can get some providers to pay more than they're paying, and if they're paying less than WAC, and by doing that you can -- and you say why don't you pay WAC, which is a higher price, well then you want to raise your price. That's -- if that doesn't shift other demand and other -- and have other effects elsewhere.
Q. And with respect to those who are sensitive, you can give them discounts off of WAC; don't you achieve both at the same time?
A. Well, but if you're giving discounts -- that's why you need to look at the average sale price. You're telling me you're making money by raising WAC to one group and you're taking -- then you're taking that money and giving it to another group with higher discounts. It's a net -- you're in a net -- you haven't gained anything. I mean it

1154

depends on trading off those groups of consumers you just told --
Q. Well that depends on the volumes you're able to achieve through discounts.
A. Well, of course.
Q. And the volumes you're able to achieve through WAC.
A. Of course. That's why average sale price summarizes that. It tells you how much -- all units you've sold to all the different groups and what they were willing to pay.
Q. And you would agree with me, Doctor, that there are some providers who are willing to pay WAC, even though ASP for a manufacturer is going down, correct?
A. The -- I -- I'm not sure I understand.
Q. I mean, I think you said before that, you know, in the distribution of prices, there will be some providers, take Zoladex for example, who are willing to pay WAC, even though, as you show in your analysis under your calculations, the ASP for Zoladex is going down. At the same time there are -

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- there are some percentage of providers who are willing to and pay -- who are willing to pay an increased WAC price over that same period of time.
MR. NOTARGIACOMO: Objection. Asked and answered.
A. All I'm saying is that ASP is going down, and there's a distribution of prices that are paid around that, and I haven't done a comparison of -- of that distribution. Whether some of that might be at WAC or the -- an average sale price assumes what you've sold to everybody averaged over the units sold.
Q. And so, you're -- sitting here today you wouldn't be surprised to know that there were sales of Zoladex at WAC throughout the class period, is that right?
A. I -- I have no opinion -- I -- the -- whatever the dollar amount of the WAC is, it -- it wouldn't surprise me that some providers -- it -- I don't know if it would surprise me or not. I haven't formed an opinion of it -- had purchased that at WAC when WAC was higher than the ASP, and

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that other providers purchased it for less than the ASP.
Q. Okay. If you pull back the -- out the attachments to your December 15th report, Exhibit Hartman 023, the Astra Zeneca attachments.
A. I'm sorry, Exhibit --
Q. Exhibit Hartman 023, Attachment G-1-C.
A. G -- Attachment G -- G-1? Attachment G-1-C, Attachment -- in my December -- this is G-1-C.
Q. I think that's right.
A. Okay and I'm sorry. You said --
Q. You have that right.
A. Okay. And I'm sorry, I thought I heard -- I thought I heard you say a page or something.
Q. No, just G-1-C.
A. Okay.
Q. Doctor, if you look at the spreads you've calculated for Zoladex for 1991, '92, '93 and '94, those all fall below your minimum liability threshold, is that right?
A. That's correct.
Q. Okay. Now, during those years you're

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aware, are you not, that the competitor drug to Zoladex was Lupron?
A. I am.
Q. And Lupron on the market at that point in time, was a therapeutic competitor to Zoladex?
A. That's correct.
Q. Okay. And I think your testimony before was that where there's therapeutic competition, that's when the increase in the spreads occur, correct?
A. That is certainly a time when we see that.
Q. Okay. Do you have -- what is your explanation for the fact that during the years 1991 through 1994 when there was a therapeutic competitor to Zoladex, Lupron, that we don't see spreads in -- in excess of your liability threshold?
A. Well, I would -- I would want -- like to do a more detailed case study, but looking at this from the level at which we're summarizing this annual aggregate data, and in the -- the context of the Lupron litigation, what certainly is -- became clear in that litigation was that Lupron and Zoladex

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were therapeutic competitors during -- during the '90s, and that Lupron -- '91, '92, '93, '94 -- started to exploit the return to practice and the use of spread to move market share very aggressively. And that behavior was essentially the subject of the sentencing memorandum in 2001 in the plea agreement.

And that the documentation that I think is -- also appears in Attachment F here deals with the fact that -- that Zoladex began to lose market share due to Lupron's activities and use of the spread, illegal use of the spread was leading to a loss of market share and that Astra Zeneca had to respond.

And if I might just look at the documents that I've cited from -- if I have -- (Witness reviews document.) So, I think -- if you look at Page 11 of Attachment F where it has some of your own internal documents, it talks about the -- the realization and the need to compete on spread and how to start to do that, and that we're seeing data and documents here from '94, '95 that started to be translated into the increased spreads that I find in

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-- in '95 going forward. So, what this says to me is that the -- there was this -- this -- for whatever reason there was, the strategic decision was not taken immediately, and you were -- and there was a loss of market share, and that was something that was of -- clearly of concern. And that there's clearly descriptions here about profits per month by oncologists on Page 13 and getting at precisely the allegations in this matter.

So it seems to me the answer to your question is that -- that in those years it hadn't been clear what precisely TAP was doing and how aggressively they were doing it. And once it became clear, in order to protect yourselves, you had to do the same thing.

MR. NOTARGIACOMO: Five-minute warning. We're at 5 of 5.

MR. FLYNN: I think if it's okay I may run a couple of minutes over, but I'll finish my examination.

MR. NOTARGIACOMO: Give you a few minutes.

MR. FLYNN: Okay.

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Q. So, your best analysis, Doctor, is that Astra Zeneca responded competitively to what TAP was doing in connection with use of the spread, but didn't do so initially, and when they started to do so, that's when you start seeing increase in the spread between AWP and ASP.

A. Well, I'm -- I have certainly seen in the Lupron documents the strategic direction to -- to bill for free samples, to increase return to practice, to do a variety of things and not let payers know that this is going on, and I'm seeing less of an initiation of that in the materials that I've -- the discovery materials I've read. But I've seen a realization that that was becoming a strategic issue to AZ overall and that they had to respond in kind and take advantage of that -- that alleged illegal use of return to practice in order just to protect themselves.

Q. Turn to the next page, Doctor. It's Attachment G-1-D, which is notes on the Astra Zeneca electronic data calculation.

A. Okay.

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Q. Do you have that in front of you?

A. I do.

Q. And is that a -- is that a complete and accurate list of the sources of data that you considered and reviewed in rendering your opinions in this case from Astra Zeneca?

A. As with all of the data listed here, we had put together as comprehensive a list as we normally ask in matters of this sort to get transactions prices, and I can't recall whether there were any data that we did not receive, but this is what we did receive and were able to -- to analyze.

Q. So, for example, at the top, AZ 0682114, Zoladex sales, Zoladex direct and indirect sales, you looked at that database and considered it in rendering your opinions and calculations in this case, right?

A. All of these sources -- this list was looked at, and then the data -- the sources of the data that were chosen and used in a standard way that we do and in the way an economist would do it

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are reflected in the descriptions of the data used thereby in G-1-D throughout, and then later in G how we calculate the spreads, it's also -- there are notes there, too.

Q. Doctor Hartman, you said several times yesterday and today in response to questions by Mr. Edwards that, in sum or substance, actual contracts, actual transactions are the more important piece of evidence that you consider in your theory of revealed preferences and expectations, correct?

MR. NOTARGIACOMO: Objection.

A. Certainly what consumers reveal and what they contract for to reimburse and what they're ready to pay tells me more about their overall understanding and how they weight all kinds of noisy information that is in the marketplace.

Q. And so, you consider actual transaction prices and contractual terms more important than testimony about someone's expectation at a particular point in time, correct?

A. Well if I -- if there's someone -- if there's testimony about -- it's always useful to

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hear testimony of someone's expectations, but it has to be done carefully to avoid -- there could be hypothetical bias. The way questions are asked in those kind of cases are very important and can lead to biased results. And in a question of -- of expectations in past periods of time, they have to be very careful that people can remember that correctly.

Q. And that's why in your opinion transactions in contract terms are more reliable indicators of expectations and preferences, correct?

A. Well, it's -- it's why comparator drugs and what they actually did for their pricing as I've done and the kinds of information that I've looked at for my liability yardsticks are more important to me than whether someone says, well, I had this expectation, or I saw one piece of data for one drug in an OIG report.

Q. Because there's something tangible about the contract. There's something tangible about the transaction and the prices at which drugs are transacted for, right?

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MR. NOTARGIACOMO: Objection.

A. In the information that I've looked at there's a -- there's a statement of -- there has been a commitment to, look, we're committing to this contract or we're committing to this drug price. So, strategy and based on all the diffuse information is institutionally -- institutionally formalized.

Q. Are you familiar with IMS data?

A. I am.

Q. Okay. And you've asked for it in this case, I take it?

A. I've asked for subsets of it, that's right.

Q. And you asked for IMS NSP data, National Sales Perspective data, is that right?

A. At one time I did, that's right.

Q. And you're aware that you received that for Zoladex?

A. I forget. As it turned out, we relied on the manufacturer data.

Q. Did you -- do you have any recollection of

1165

whether you considered the IMS NSP data for any of the drugs in this case?

A. The -- the IMS data that we had requested was directed more at the self-administered drugs through the retail channels, and once those -- those classes were eliminated, we focused less on that and went to the manufacturer data.

Q. Your testimony is not that you did not request Zoladex NSP data, did you, from IMS?

A. No, I'm -- I'm sure we -- we request as much data as we can get. And I know in the process of doing this report we asked for NSP data, and we were continually negotiating with Defendants -- my recollection is I asked the staff. They were saying, well, no, we're not going to give you this but maybe we'll give you this, you know, and there was a time when we had to give up certain data to get the NDTI data. And my recollection was that I -- that I said, well, we have manufacturer data here, so for spread measures, and if Defendants are reluctant to respond to all our IMS requests, I want to get the -- the National Disease and Therapeutic

Index data, rather than the other data, 'cause that's important for the -- that other part of the analysis to enhance the NAMCS data.

Q. But other than that there's no reason that you chose not to rely on IMS data, NSP IMS data?

A. The -- for what? Are you --

Q. For anything. You asked for it and you chose in your report not to rely on it, it appears. I'm just wondering if you made any conscious decision in that regard?

A. As this unfolded and the analysis was conducted as it was, it was not necessary to make use of it in my opinion.

Q. But there was no reason, other than it just became unnecessary, that you chose not to rely on NSP data from IMS, right?

A. I felt we -- it didn't -- it didn't help this analysis. So, I didn't add -- add an analysis of that data.

MR. FLYNN: That is all the questions I have at this time.

MR. NOTARGIACOMO: Well, we're adjourned

until tomorrow.

VIDEO OPERATOR: The time is 5:07. This deposition is suspended. This is the end of Cassette 4. We're off the record.

(Deposition recessed at 5:07 p.m.)

_____

RAYMOND S. HARTMAN, Ph.D.

Subscribed and sworn to and before me this _____ day of _____, 20____.

_____

Notary Public

Commonwealth of Massachusetts
Middlesex, ss.

I, P. Jodi Ohnemus, Notary Public in and for the Commonwealth of Massachusetts, do hereby certify that there came before me on the 28th day of February, 2006, the deponent herein, who was duly sworn by me; that the ensuing examination upon oath of the said deponent was reported stenographically by me and transcribed into typewriting under my direction and control; and that the within transcript is a true record of the questions asked and answers given at said deposition.

I FURTHER CERTIFY that I am neither attorney nor counsel for, nor related to or employed by any of the parties to the action in which this deposition is taken; and, further, that I am not a relative or employee of any attorney or financially interested in the outcome of the action.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my seal of office this 28th day of February, 2006, at Waltham.

_____

P. Jodi Ohnemus, RPR, RMR, CRR
Notary Public, Commonwealth of Massachusetts
My Commission Expires: 4/21/2007

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